STATUS REPORT OF FRANCE

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ABSTRACT

This paper summarizes the new orientations of the French Government for road safety improvement in relation to vehicle safety. It briefly describes the vehicle safety aspects in the French programs of Research and Development in Transport (PREDIT) and confirms the support of France to pre-regulatory research for vehicle safety improvement at the European level (EEVC) and through IHRA. Considering the needs to continue international cooperations, the paper concludes with proposals to go further in the area of vehicle safety.

INTRODUCTION

Road safety issues are taking an increasing importance in the decisions taken by the French Government since the last ESV Conference.
From 1999 to 2002, the number of fatally injured road users dropped from 8 029 to 7 230, corresponding to a change from 167 572 to 137 500 persons injured in road traffic accidents. The diminutions over this period were 10 % for fatalities and 18 % for casualties. If we consider the most recent figures, in 2002 compared to 2001, the number of fatalities and casualties decreased respectively by 6.3 % and 10.7 %. This trend is confirmed by the most recent figures.

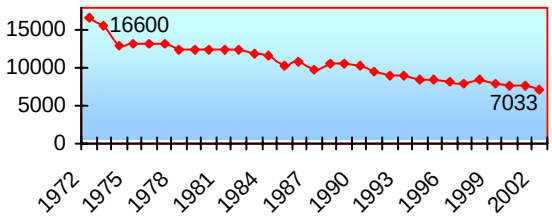

Figure 1. Evolution of road traffic fatalities in France over the past 30 years.

FRENCH PUBLIC POLICY FOR ROAD SAFETY

As indicated during the 17th ESV Conference, France has set up the National Council for Road Safety (CNSR, Conseil National de Sécurité Routière). This independent body includes representatives of all parties having activities linked with road safety, and is aimed at advising the government on the orientations for road safety improvement. The first proposals were mainly related to changing the behavior of drivers through enlarging the information on risks, and developing control campaigns for overspeeding, drink and driving and other offences against safe driving rules. This group also considers that applied scientific research is important to go further in improving road safety, especially in the areas of accident studies, driver behavior and new technologies for safety improvement.
Improving road safety has been selected by the French Government as a first priority and taking that into account, during its 18 December 2002 meeting, the CISR (Interministry Committee for Road Safety) took several important decisions.
Given that the road is the first cause of violent deaths in France, the government has launched a program of actions with three main objectives: moving towards an active road safety, a better control of vulnerable drivers, and developing road risk prevention.
Among a large number of measures to be put in place within a short period, several are concerning vehicle safety and injuries to victims.
In 31.2 % of fatal accidents in 2001, one driver at least was intoxicated with a BAC over the legal limit (0.5 g/l). It has been proven that alcohol associated with medical drugs and/or illicit drugs is incompatible with a safe driving behavior. These facts lead to consider road safety as a public health problem. It is then proposed to provide a better information to users and to detect alcohol and drugs in people injured in accidents.
The program aimed at developing research for accident prevention will run until 2008 and will include research on increasing the knowledge in accident scenarios, in injury mechanisms and epidemiology of injuries. It will also boost the development of new technologies aimed at detecting and preventing accident risks.
A special attention will be given to head trauma.
In order to promote the use of new devices intended to improve safety, all cars belonging to French administrations will be equipped with crash event recorders, adaptative speed control systems and seat belt reminders. In parallel, France will support, at the European level, the introduction of adaptative speed limiters (ASLD) on all vehicles, complying with ECE R89 amended in November 2001.
In the same area, France supports the research program "LAVIA" which investigates the feasability of interactive speed control systems using new technologies.

This speed limiter adapts to the authorized speed limit and can work in three modes: the informative mode in which the driver is informed on the actual speed limit, but keeps the control of the car speed; the active mode in which the car cannot go faster than the actual speed limit, and the kick down mode in which the driver can go over the speed limit, with a specific action on the accelerator pedal.

THE FRENCH TRANSPORT R&D PROGRAMS

Since 1983, France has issued several transport research and development programs, each covering several years. The third one, called PREDIT 2, has been recently completed, whereas the following one, called PREDI 3, is in progress.

The PREDIT 2 R&D Transport Program

This program covered the period running from 1996 to 2000; because of the time needed to complete projects, few of them are still in progress.
That program was divided in four domains, and the domain "Sciences and Technologies" comprises a thematic group on safety ergonomics and comfort. One hundred and seven projects were selected in this area, for a total financial support amounting to about 35 M ; a great number of those projects dealt with safety, and more especially passive safety.

The PREDIT 3 R& D Transport Program

The third research and development program was launched at the end of 2001 and will cover the period 2002-2006. Two operating groups are dealing with safety:

Operating Group 3: New knowledge for safety

This group is aimed at producing knowledge on the current stakes prevailing in the ground transport area in terms of safety, and on the effectiveness of public policy in this area.
Taking into account the bad situation of road safety in France, this group is supporting research related to the socio-political dimension of this issue; it also proposes to pay attention to methods for analyzing public policy measures and their feed back. Two additional axes are selected: individual behavior in relation to risk taking, and public health approach in relation to illness, medical and illicit drugs, vulnerable adult users (two-wheelers and pedestrians) and the most severe accident conditions (side impact).

Operating Group 4: deals with "Technologies for National Safety"

The aim of this group is to create a cultural exchange through the development and the use of new technologies for a quieter driving, and to balance requirements between efficient traffic and road safety. This group supports new research works dealing with environment perception by the driver in relation to the use of driving aids, detection of the drop of alertness, and how to share the responsibilities between the driver, the system provider, the service operator and the public authority.
Early in 2003, this group launched a call for proposals for researches on vulnerable users, including pedestrians, motorcyclists, children and elderly people, for a total support of 2 M .

Figure 2. Compatibility assessment with a progressive deformable barrier.

IMPLICATION IN EUROPEAN RESEARCH PROJECTS

France, through research institutes (especially INRETS), universities, crash test laboratories and car industry (manufacturers and part suppliers) has increased its participation in research projects within the 5th framework program. Particularly, it actively participates in the European Vehicle Passive Safety Network, having the responsibility for the Biomechanics task within this network.
Considering that the development of new knowledge and tools are necessary to go further in car safety assessment, INRETS, French National Institute for Research in Transport and Safety, has taken the coordination of the E.U. project HUMOS II, aimed at developing an advanced numerical human model for use in virtual testing. French researchers are also active in several other European projects in the area of vehicle safety, such as V.C. Compat, SIBER, FID or PENDANT.

We strongly believe that these European projects are of the utmost importance to prepare the scientific contents of future regulations.
Taking that statement into account, several proposals to the first call within the 6th framework will involve the participation of many French researchers and teams in the areas of active and passive safety, through Integrated Projects (IP) as well as Networks of Excellence (NoE), with a key role in some of them.

SUPPORTING PRE-REGULATORY ACTIVITIES

Considering that new regulations, or improvement of existing regulations, need to be based on a larger scientific knowledge, France strongly belives in the role of the EEVC in the pre-regulatory research field. In that matter, we play an active role in the EEVC steering committee, chaired by a French delegate, and will continue to work to an enlargement of the recognition of the EEVC as reference body in pre-regulatory research in Europe. Recent European decisions in this area have confirmed the importance of the EEVC contribution. France is also actively participating in all EEVC working groups as described in the Status Report of EEVC.
France has joined EuroNCAP and then will contribute to the evolution of this program to cover more aspects of car safety, such as active safety and compatibility, but in such a way that only scientifically developed and validated procedures are considered.
We believe that priorities for passive safety will be affected by new developments in active safety, and for this reason, we support the enlargement of the EEVC scope to this area as well as the IHRA working group on ITS.
In the global organization of pre-regulatory research, we consider that IHRA is playing an important role for future international harmonization. With IHRA, we can expect more ambitious harmonized proposals, since the work done within IHRA is allowing to develop a common scientific approach for new knowledge in the area of car safety assessment.
The research results collected and analyzed within EEVC through national contributions, and transferred to IHRA working groups, allow to develop common views and proposals in the main area of vehicle safety improvement.
These proposals are mainly used by the groups in charge of developing new worldwide regulations, especially GRSP/WP29 in ECE/UNO. In that aspect, France is supporting these international regulatory activities at different levels, including the GRSP ad hoc group, such as the group aimed at developing a GTR on pedestrian safety.

FUTURE

Knowing that research on vehicle safety has been very active over the last years, and that it becomes more and more difficult to go further, research programs have to be more internationally co-ordinated to avoid duplication.
Because of this evolution, it is important that accident data can provide the necessary knowledge to help to prioritize and to define the background of research works to be performed.
Accident research is also necessary to scientifcally evaluate the consequences of new measures taken or proposed.
We support the need to link accident research teams at the European level, based on national programs in this area.
Up to now, the assessment of car safety focuses, for the main accident condition (frontal, side, pedestrian, etc.), on a single accident condition, whereas each accident is unique; it is then proposed to consider variations in accident situations as well as in users characteristics. The possibility of using numerical simulation to enlarge the assessment conditions, in addition to crash tests, has to be explored.
The development of basic knowledge necessary to progress in the improvement of car safety, especially for rule making activities, implies that these researches are organized at the European level with national support and with contributions from the car industry.
The evaluation of the real effectiveness of measures recently enforced is an area which needs more efforts at the international level, and from which we could learn many things helping to develop a strategy in car safety improvement.